"Resonant magnetic x-ray scattering of thin antiferromagnetic Ho films"

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The magnetic structure of thin Ho metal films grown in situ on W(110) was studied by resonant magnetic x-ray scattering at the L and M resonances. Magnetic x-ray scattering from thin Ho metal films at the M5 resonance reveals atomic scattering lengths up to 200r0, which is of the same order of magnitude as predicted by Hannon et al. [Phys.Rev. Lett. 61, 1245 (1988)]. A direct comparison to magnetic neutron scattering demonstrates the potential of the method for studies of complex magnetic structures in ultrathin films and highly diluted materials.